Macroeconomic Assumptions

This section presents the macroeconomic projections underlying the USDA baseline. Domestic macroeconomic projections are presented first, followed by a discussion of the international projections. The open U.S. economy is increasingly affected by international macroeconomic conditions, trade policies, and exchange rate movements which in turn affect the demand for U.S. farm products, costs of production, farm income, farm asset values, and food prices.

Domestic Macroeconomic Projections

Domestic macroeconomic forecasts through 1998 were developed in September 1997 and are based on data available through August 1997. The long-term projections for 1999-2007 assume trend growth of major macroeconomic indicators. Shocks, such as large unexpected oil price hikes, cannot be anticipated, and the use of trend projections focuses on the long-term economic and demographic forces driving the economy. In particular, growth in the labor force and labor productivity determines projected GDP growth.

Short-term U.S. Outlook: Low Inflation, Good Growth

The U.S. economy is in the mature phase of the economic recovery that began in 1991. Nevertheless, gross domestic product (GDP) growth was a moderately strong 2.8 percent in 1996, despite a sharp rise in the price of crude oil. Imported crude oil prices rose from $17 per barrel in 1995 to more than $22 by early November 1996. In 1997, GDP expanded about 3.5 percent, with unemployment averaging 5.0 percent, down 0.4 percentage points from 1996’s rate. Low unemployment rates of the last two years indicate a tight labor market. At this stage of the business cycle, tightening labor markets would ordinarily mean rising wage-induced inflation. However, prices in 1997, as measured by the consumer price index (CPI), rose only 2.5 percent, less than in 1996.

Strong labor productivity growth and modest growth in total compensation in 1996 and 1997 combined to produce increases in unit labor costs only modestly above inflation. As a result, cost pressures and producer price inflation were low in 1997. The small rise in producer prices, falling energy prices, and falling import prices combined to keep CPI growth in 1997 below 1996's modest rate.

The rise in GDP in 1997 was led by very strong growth in business investment in computers, strong growth in consumer durable spending for furniture and appliances, and good growth in consumer spending on services. The spectacular growth in demand for computers was driven by sharply falling computer prices, record high business profits, and readily available business credit. Real computer prices drop because rapid technological innovation results in declining average production cost. In 1997, U.S. computer prices fell more than normal since the stronger dollar meant lower prices for imported components. Furniture and appliance sales growth was strong as household income growth was good and consumer credit rose to record levels relative to income. Service spending grew in response to very good disposable income growth.

In 1998, GDP and employment growth will slow from the rapid pace of 1997, largely because of slowing investment growth, particularly in computer equipment, and moderating growth in consumer durable spending. Since labor markets will remain tight, wages and compensation will rise relative to profits. Slowed profit growth in 1998, with modest increases in interest rates and tighter credit conditions, will curtail the rapid growth in business equipment spending. The dollar is expected to be relatively stable in 1998, so price cuts for computer equipment will not be as sharp as in 1997.

Tighter credit conditions and good disposable income growth will result in moderating consumer durable sales in 1998. Ready access to credit allowed a record high consumer debt burden in 1997, and resulted in record high personal bankruptcy rates and rising credit card delinquency rates. In response to increased bankruptcies and loan delinquencies, banks will apply tighter credit standards to consumer loans made in 1998 than they did in 1997. Still, the expected strong growth in disposable income and strong consumer confidence will more than offset tighter credit conditions, allowing for moderate growth in consumer durable spending in 1998. Continued strong consumer confidence and growth in personal income from higher wages will keep consumer spending on nondurable goods and services quite strong.

Despite improved economic prospects in Europe in 1998, the strong dollar will restrain U.S. export growth. Stronger local government spending will offset slower growth in Federal spending. Slowing growth in consumer and investment spending, a bigger trade deficit, and sluggish Government spending will result in GDP growth of about 2.3 percent for the year.

Moderating GDP growth will prevent severe labor market and production bottlenecks and thus limit inflation in 1998. Consumer prices are forecast to rise by 2.9 percent, faster than in 1997 and about at 1996's pace. Import prices are expected to increase only modestly. Faster growth in the developed economies will keep oil prices up and mean somewhat higher producer price inflation. A continued tight labor market makes modest real compensation increases all but certain for the year. Given moderating growth and low inflation, U.S. interest rates will be relatively stable through 1998, although slightly higher than in 1997.

Long-term U.S. Outlook

Major assumptions underlying the long-term U.S. macroeconomic projections are:

- Fiscal policy is tight, consistent with a balanced federal budget in 2002. Even with higher local government spending picking up some of the federal spending slowdown, overall government spending growth averages only 0.3 percent per year from 1999 through 2002. By 2002, government purchases of goods and services slip from second to third place among the components of GDP, behind consumption and investment. It is likely that 2002 will see a modest Federal budget surplus for the first time since 1969. In 2003 to 2007, Government spending grows at the rate of population growth.

Unemployment, Inflationary Pressures, and Federal Reserve Board Monetary Policy

The non-accelerating inflation, rate of unemployment--known as the NAIRU--is the unemployment rate consistent with stable inflation. Sustained levels of unemployment that depart from the NAIRU can be an indication of potential effects on the inflation rate stemming from the labor market.

A recent survey conducted by the National Association of Business Economists indicated that more than 70 percent of surveyed business economists view the NAIRU as a band of unemployment rates as opposed to a single number.

The Council of Economic Advisers estimated an historical band for the NAIRU of 5 to 7 percent. Based on the last fifty years, if unemployment is between 5 and 7 percent, inflation showed no systematic tendency to accelerate or decelerate. When unemployment is above 7 percent, inflation drops. Conversely, when unemployment is below 5 percent, inflation rises.

The Federal Reserve Board (Fed) uses a narrower range. Testimony by Federal Reserve Board Chairman Alan Greenspan in the spring of 1997 indicated that the consensus NAIRU estimate of the Fed's Open Market Operations Committee at that time was 5.3 to 5.7 percent.

The complexity of the economy makes the unemployment rate an incomplete measure of the degree of utilization of resources. As a result, the Fed considers a wide range of indicators such as industrial production, capacity utilization, labor compensation, labor productivity, and wage rates to judge if the economy is running above or below its potential. Further, the Fed looks at labor force quit rates, length of unemployment, regional wage increases, and other indicators to assess labor market tightness.

Nevertheless, the NAIRU is a useful summary benchmark of an economy's annual labor market growth limits. An unemployment rate consistently above the NAIRU reflects an easing of inflationary pressure. A year spent above the NAIRU will likely lead to a lowering of short-term interest rates in the following year due to Fed intervention.

The average point estimate for NAIRU in the most recent Survey of Professional Forecasters was 5.25 percent. Over the 1996-2007 period, baseline projections indicate the annual unemployment rate to average between 5.0 and 5.5 percent with a central tendency of 5.2 percent--in line with the forecasting community's judgment. A trend GDP growth rate of 2.5 percent is consistent with that NAIRU. The long-term macroeconomic baseline projections assume that the Fed will raise short-term interest rates when unemployment falls below 5.2 percent to keep CPI inflation at about 3 percent. Conversely, when unemployment goes to 5.3 percent, the Fed will lower interest rates to keep GDP growth at the maximum sustainable rate.

- The Federal Reserve remains committed to containing inflation even as the government deficits shrink. Money supply expands 5.3 percent annually between 1998 and 2007, reflecting moderately tight monetary policy and trend GDP growth of 2.5 percent.

- Real crude oil prices rise 1.1 percent per year from 1999 to 2007, consistent with medium-term Department of Energy projections made in January 1997.

- Labor productivity growth will be in the 1.1 to 1.2 percent range from 1998 to 2007. This is modestly faster than growth in the previous 15 years. Productivity improvement comes primarily from a rising investment share in GDP, low real oil and material price increases, and real interest rates lower than they would have been without deficit reduction. Trade liberalization from the NAFTA and GATT agreements also aids productivity growth throughout this period.

- Employment grows about 1.3 to 1.4 percent a year until 2005, which is broadly consistent with Bureau of Labor Statistics projections, the tightened welfare and disability qualifications now in place, and expected immigration. For 2006 and 2007, growth in employment slows as the first wave of baby boomers retires in significant numbers.

- Real GDP in OECD countries, minus the United States, grows about 2.4 percent through 2001 and averages 2.2 percent from 2002 to 2007.

- Federal deficit reduction and lower inflation expectations mean smaller interest rate differentials relative to U.S. trading partners. U.S. inflation will remain higher than in Canada and Japan, but close to that of Germany, France, Italy, and the United Kingdom. The inflation differential drives the modest decline in the value of the dollar from 2000 to 2007.

Baseline U.S. macroeconomic projections show a long-term recovery from the below-trend growth of the late 1980s and early 1990s. From 1998 to 2007, the economy grows by 2.5 percent annually. Real compensation lags productivity growth, mainly because of a more open economy. Business and dividend income increases relative to wages, which supports personal income growth. Disposable income grows as fast as GDP.

Without commodity price shocks or abrupt changes in macroeconomic policy, stable growth generally implies stable inflation. Consumer price inflation is projected to average 3 percent over the next decade. This moderate inflation outlook assumes monetary policy focuses on containing inflation. Real short-term Treasury-bill rates average slightly less than 3 percent, reflecting relatively tight Federal Reserve policy as well as the beneficial effects of fiscal deficit reduction. Real long-term Treasury-bond rates of about 4 percent reflect lower Government demand for credit as Federal deficits are eliminated.

The stable domestic financial environment, global trade liberalization induced by the Uruguay Round GATT and the NAFTA accords, low oil prices, and moderate growth in OECD countries will mean that U.S. exports grow faster than imports. Thus, the real U.S. trade deficit falls to about half the current level by 2007.

Strong export growth, combined with gains in domestic consumer demand, provide impetus for strong growth in capital investment, similar to that seen in the 1960s. A high depreciation rate will further enhance gross investment as more capital spending is devoted to short-lived equipment and less to long-lived plant construction. Low real interest rates and less competition from the federal government in credit markets will provide major support for strong investment growth.

Eliminating the budget deficit and reducing the real trade deficit will lead to only small adjustments in private domestic consumption. Thus, consumer spending grows about as fast as GDP and the consumption share of GDP is about the same in 2007 as in 1997. However, because of slow Government spending growth, the investment and export shares of GDP increase.

International Macroeconomic Assumptions

The international macroeconomic assumptions used in the baseline were completed in October 1997. The outlook for the world economy over the next 10 years shows stronger growth than during 1990-96. Real GDP is projected to grow by 3.2 percent annually through 2007, compared with 2.3 percent during 1990-96. The developing Asian economies are expected to remain growth leaders, despite 1997's currency devaluations and related slowdowns in Southeast Asia (see Asia Crisis box, page 17). Asia's output will grow at a more sustainable 6.6-percent pace over the next decade, down from 7.8 percent during 1990-96. Significantly stronger growth than during 1990-96 is expected in Latin America, North Africa, Eastern Europe, and the former Soviet Union. The developed economies, including the United States, will grow at potential GDP expansion rates of 2.4 to 2.5 percent. Inflation is expected to be low in the developed economies and moderate in the developing countries. The real price of oil is expected to increase 1.1 percent annually.

Developed Economies

In the coming decade, the developed economies will improve GDP growth from the low rates of the first half of the 1990s. Low inflation and, thus, low interest rates will help countries produce output close to potential levels. Government budgets, except in Japan, will be largely balanced. However, external imbalances may persist, particularly the large U.S. trade deficits with Japan and China. Among the major economies, only the United States will continue to carry a large current account deficit, which means comparatively higher U.S. interest rates to finance the deficit.

European Union

The coming monetary union between qualified members of the European Union (EU) and introduction of a single currency will enhance the efficiency of cross-border trade and investment within Western Europe. More uniform fiscal policies, as well as disciplined monetary policy guided by the German-based central bank, should lead to more stable growth prospects early in the next century. The European economy is projected to expand by 2.2 percent on average from 2002 to 2007, while population growth reaches record lows.

Unemployment will remain high relative to the United States., but should gradually fall as less regulated labor markets and more flexible wages are adopted. Inflation should be well controlled as a strong unified currency--the Euro--acts as an anchor for price stability. Fiscal consolidation by member countries will reduce inflationary expectations and lower long-term interest rates. The Euro is projected to appreciate in real terms as the currency becomes widely used for world trade and for international reserves. Because of monetary union, national differences in real interest rates will disappear--financial markets will encompass the whole region, and thus investment opportunities will depend less on the relative availability of capital in each country.

Greater intra-European trade should encourage price arbitrage of homogeneous products and services, providing comparable prices across countries for both producers and consumers. As capital freely moves across borders, investors and producers would be able compete on more equal terms across countries of the EU, despite the lack of transnational mobility of workers. Even without formal eastward enlargement, closer integration with Eastern Europe also opens more trade and investment opportunities in the transition economies, particularly the former Soviet Union. As the transition economies gain higher per capita incomes, imports from the EU should rise accordingly.

Japan

The Japanese economy should eventually climb out of the anemic growth that prevailed during most of the 1990s. Domestic demand will revive as Japanese banks slowly strengthen their capital base after writing off remaining bad loans and as the property and stock markets rebound. Manufacturing production should lead the way toward more vigorous economic activity, led prominently by exports of high-value products. In the longer run, recovery of Southeast Asian economies will provide additional demand for Japan’s capital exports and manufactured goods.

The yen is expected to appreciate as the Japanese economy revives and as interest rates finally rise, but the current account surplus will remain large. The deregulation of Japan’s financial market also is likely to boost the yen as foreign capital funds are attracted. Opening Japan’s retail and insurance markets to foreign competition will lower prices of goods and services. Opening the air transport market to more U.S. carriers will help boost Japanese tourism in the United States as air fares fall.

A structural problem of Japan’s economy is the excess of savings over investment, as manifested in its sizable current account surplus. This fundamental imbalance, together with non-tariff barriers that restrict imports and foreign investment, keep the domestic economy isolated from global competition. High internal costs in the non-manufacturing industries such as farming, house construction, and power generation have held back investors as well as consumers. More deregulation, not unlike that in the financial sector, will help sustain domestic demand, specifically private consumption and investment, as well as boost imports.

Canada

Canada's growth pattern in the 1990s has roughly tracked the U.S. GDP path because of the close integration of trade and investment between the neighbors. Each country is the other's largest trading partner and NAFTA has reinforced that relationship. Canada has consistently had a trade surplus with the United States in the 1990s, the destination for 82 percent of its exports. A competitive Canadian dollar significantly influenced this pattern. A steady depreciation against the U.S. dollar since 1990, plus a lower inflation rate relative to the United States, has helped boost the Canadian currency's real exchange rate competitiveness.

The future growth path for Canada depends to a large extent on the pace of U.S. economic activity, augmented by growing trade with Asia and Mexico. Already considerable, Canadian trade with Asia should further expand as APEC relationships become closer. Trade with Mexico is already on the rise as stimulated by NAFTA. The country's trade surplus is projected to continue growing beyond 2000.

The overhaul of Canada's welfare structure from large deficit to surplus is principally responsible for the country's bright growth prospects. Less government spending and more funds available for private investment and consumption allowed market forces to revive previously anemic growth as interest rates significantly fell. Low inflation and interest rates are expected to carry healthy GDP expansion through the next decade. Also, foreign debt (as a percentage of GDP) will fall by 35 percent over the next 10 years. Domestic demand in the short and long term is to be led by fixed capital formation. National savings (as a share of GDP) will increase to around 22 percent as compared to only 13.5 percent for the United States.

Transition Economies

Countries that are ahead in the transformation to market economies are experiencing higher growth than those who have only recently carried out reforms. The first group includes Poland, the Baltic countries, the Czech Republic, Hungary, the Slovak Republic, Croatia, and Slovenia. The second group includes Bulgaria, Romania, and the former Soviet Union. The principal measure of the success of reform, which also coincides with higher GDP growth, is the degree of integration into the global economy--trade flows, investment flows, and currency convertibility. More liberalized trade arrangements with more countries and the amount of foreign direct investment and portfolio inflows indicate the linkage level and relative competitiveness with the world at large, particularly Europe and the other advanced economies.

Central and Eastern Europe

Transition economies in this region, except Bulgaria, posted relatively fast growth between 1994 and 1996 after severe contractions in the early 1990s associated with the switch from central planning. Poland, Hungary, and the Czech Republic are expected to register nearly 5 percent growth on average in the second half of the 1990s after undertaking market reforms and increasing openness to trade and competition. A reorientation of trade from the former Soviet Union to the West has contributed to their strong performance. But in some countries, like

Bulgaria, reforms have only recently begun. Romania, which recently shed heavy state intervention in the economy, should soon expand in pace with its more advanced neighbors. The growth outlook for this region is relatively optimistic at over 4 percent in the next 10 years. A crucial advantage over the former Soviet Union is proximity and closer integration with the European Union. Foreign direct investment, particularly from high-cost countries like Germany, will increase the region's capacity to export. As the cross roads between the East and the West, the region should benefit as trade increasingly flows through its countries.

The Former Soviet Union

After almost a decade of economic retrenchments and setbacks, the countries of the former Soviet Union are poised for positive but slow growth over the next decade. In Russia, GDP is projected to expand by 1.5 percent in 1999 and reach 3 percent by 2001. The smaller countries of the region have been growing since 1996, with growth projected to be 3 percent in 1998. Overall GDP for the region is anticipated to average between 3 and 3.5 percent from 2002 to 2007. The fruits of privatization and market-based pricing are finally contributing to production gains and more widespread consumption. Foreign direct investment appears to be gathering speed now that inflation is increasingly contained and the ruble is stabilizing. Capital flight is also less of a problem. Monetary policy by Russia's central bank, if not yet in full supervision of the banking system, has at least controlled credit creation and largely demonetized government spending.

Prospects for mid-term growth in Ukraine are modest but should also improve after its longer period of restructuring and weaning of government subsidies. Significantly increased trade with Russia and the other former Soviet republics is critical in the Ukraine's transition to a higher income country. The smaller countries of the FSU are expected to average higher growth rates because of increasing trade and production of agricultural products and natural resources, particularly crude oil and natural gas. Nevertheless, only large inflows of foreign investments can lift their relatively slow growth prospects.

Developing Countries

Overall, the developing countries will maintain close to 5.5 percent average growth over the next decade, compared to around 5 percent during 1990-96. Emerging markets in Latin America will continue to attract investment funds as long as the developed economies maintain their healthy growth or recovery and if real interest rates in the United States, Europe, or Japan do not rise significantly. The currency devaluations in Southeast Asia will encourage more flexible exchange rates, which prevent overvalued currencies and act to discourage inflows of speculative funds or excessive borrowing of foreign money. Stronger financial systems and stricter banking regulation, reinforced by timely and transparent statistics, will reduce the risks of excessive lending and promote more stable growth paths in the longer run.

Mexico

The Mexican economy has almost fully recovered from its deep recession in 1995 that was precipitated by the peso's devaluation in late 1994. While the domestic sector has not fully bounced back in terms of real wages and former consumption levels, business investment and export growth are healthy again. Mid-term growth prospects are in line with potential GDP of 5.5 percent. The inflow of foreign capital and expanded trade with the United States because of NAFTA have boosted Mexico's production and export capacity. The devaluation of the peso by about 50 percent in 1994-95 made Mexican exports more price competitive.

Starting in 1996, however, the peso has appreciated in real terms against the U.S. dollar, largely because of Mexico's success in attracting foreign investment funds. That is, despite a floating exchange rate and inflation higher than in the United States, confidence in holding pesos, and in the Mexican economy in general, is strong. But these gains in purchasing power have fueled Mexican imports, generating a trade deficit and a higher current account deficit. The long-term growth outlook falls slightly to 4.6 percent because Mexico needs to continue modernizing its infrastructure and build up competitive export industries. These measures entail imports of capital and intermediate inputs that would raise the current account deficit beyond 2000.

China

While China's growth has been consistently the strongest in Asia for a number of years, it is expected to slow from the double-digit pace of the early 1990s to a more sustainable pace of around 8 percent in the next decade. With population growth of less than 1 percent per year, per capita GDP gains will remain impressive at above 7 percent annually. These gains will penetrate China's poor inner provinces and likely improve productivity in the agricultural sector as more capital-intensive farming and food processing are undertaken. Inflation has now subsided to single digits, but real output gains are expected to be slowed by adjustment problems of unemployment, as privatization of state-owned enterprises accelerates, and by competition from foreign firms. Credit supply will be directed less by the government and more by independent banks, and thus access to credit will increasingly be market-based. The eventual convertibility of the yuan in the capital account, which should attract more foreign equity funds, also permits the outflow of domestic funds for foreign investments. Real wages will rise as worker productivity grows. The country's high savings rate will keep interest rates relatively low in spite of increasing demand for capital, especially to finance infrastructure projects. Competition for lower-value export markets should intensify as other developing countries, including Vietnam and India, increasingly enter those markets.

East and Southeast Asia

Output growth in East and Southeast Asia is projected in the baseline to remain strong over the next 10 years, despite 1997's currency devaluations and related slowdowns in the region. Growth is projected at 6.8 percent over the next decade, down from 8.6 percent during 1990-96. In the near term, growth is slowed somewhat by currency devaluation and deflation of asset prices, especially in Thailand, Indonesia, and Malaysia. Economic growth in these countries is assumed

The Asia Crisis: Baseline Assumptions and Impacts

The wave of exchange rate devaluations, stock market declines, and severe credit shortages now affecting many East and Southeast Asian economies was underway as the macroeconomic assumptions for this baseline were developed in October 1997. At that time, the number of countries affected, as well as the depth and duration of impacts on the region's economies, was uncertain. Based on information available in October 1997, the baseline assumed impacts on economic growth and real exchange rates in Thailand, Indonesia, Malaysia, and the Philippines, but not on other countries, either in East Asia or outside Asia.

For the four Southeast Asian countries, a significant slowdown in economic growth, along with continued exchange rate instability, is assumed during 1998-2000. By 2001, however, economic growth rates are assumed to return to previously projected growth paths, and exchange rates to either stop depreciating or show a significantly slower loss of purchasing power. No impacts on long-term growth are forecast because of basically sound economic fundamentals, and the increased export competitiveness resulting from the currency devaluations. Reforms of banking practices, including opening of financial sectors to foreign investment and competition and liberalization of capital controls, as well as maintenance of more flexible exchange rates, will be needed to return to historic growth paths. If these reforms are not made, longer-term growth prospects could be reduced in Southeast Asia, as well as in other parts of Asia.

For 1998-2000, Thailand's economy is assumed to be the most affected by the crisis, with real GDP growth dipping to 1 percent in 1998/99. Indonesia, with a relatively small current account deficit is assumed to experience a less severe downward adjustment in growth. Malaysia's near-term growth prospects are also assumed to be less dire than Thailand's because of more balanced economic fundamentals, while the Philippines is expected to be the least affected of the four countries.

Figure 1. Southeast Asia: Real GDP growth rates

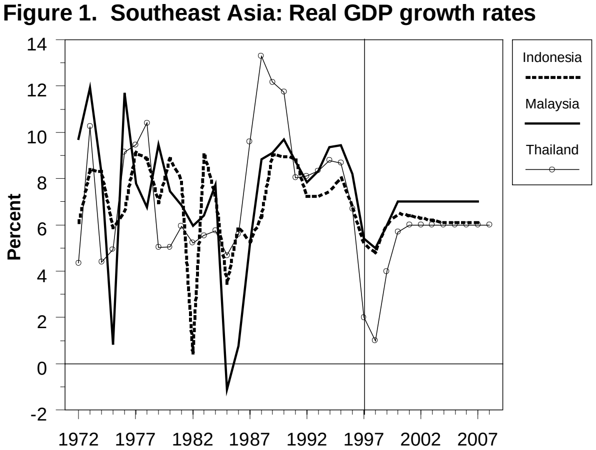
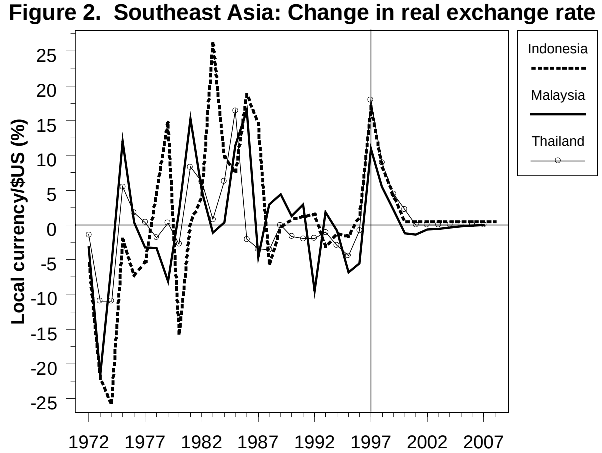


Figure 2. Southeast Asia: Change in real exchange rate



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The Asia Crisis: Baseline Assumptions and Impacts -- Continued

Agricultural Trade Impacts. The surge in Southeast Asian imports of feed grains, feed protein, and wheat during the 1990s has been driven largely by rising incomes and import capacity, increasing urbanization, and population growth. The financial crisis will affect agricultural imports by slowing income growth and, due to devaluation, by sharply increasing local currency prices faced by domestic consumers and producers. Declines in import demand will be most significant in cases where consumption is most sensitive to changes in income or prices, or where domestic production can respond to higher prices and substitute for imports.

Based on these factors, and with the baseline assumption of growth and exchange rate impacts only in Thailand, Indonesia, Malaysia, and the Philippines, Southeast Asian imports of feeds, particularly corn, are likely to be most affected by the crisis. Rising meat consumption in the region has been met almost entirely by domestic production that is increasingly dependent on imported corn and soy protein. Slowed growth in meat demand and production and, particularly in the case of Thailand, higher local feed production, will slow demand for feed imports. Wheat import demand is expected to be less significantly affected because of its important role in urban diets and the lack of local production capacity. Rice imports by Indonesia and, to a lesser extent, the Philippines, are projected lower due to the crisis, primarily because of supply response to higher local currency prices. Cotton import demand is expected to be down slightly, as lower domestic textile demand is significantly offset by the increased competitiveness of the region's textile-based exports.

The region's agricultural exports are expected to be more competitive following devaluation. Significant gains are expected in Thailand's export supplies of rice and poultry. And, although palm oil production should not respond to higher prices in the near term, higher consumer prices are expected to release more supplies of Malaysian and Indonesian palm oil into world markets following the crisis.

Other Scenarios. The macroeconomic assumptions used for the baseline were made at a time when the outcome of the Asian financial crisis was highly uncertain. Deeper or longer term disruption of the Southeast Asian economies would have more significant impacts than included in the baseline, as would a spread to the major East Asian markets, to China, or to economies outside Asia. Although agricultural imports by Japan, Korea, and Taiwan are not highly responsive to changes in income and prices, even small percentage impacts on these large markets for both bulk and high-value commodities could have significant impacts on world markets. China's imports appear to be both income responsive and price responsive. Significantly slower economic growth in China, or devaluation of the yuan, would have significant impacts on prospects for global trade in wheat, corn, and soybeans and products.

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The Asia Crisis: Baseline Assumptions and Impacts – Continued

After this baseline was completed, an analysis of the impacts of the Asia financial crisis was conducted by USDA in late-December 1997 to assess the evolving Asian situation which had worsened from the assumptions used in this report. For this analysis, growth and exchange rate impacts in the 4 major Southeast Asian economies were deepened from those assumed in this baseline, and impacts were extended to Japan, Korea, Taiwan, Australia, Argentina, Brazil, and Mexico. Growth and exchange rate impacts were assumed for 1997-2000, with the crisis resolved in 3 to 4 years. In addition, income growth was slowed for China, but no devaluation was assumed.

In addition to the moderate impacts of the Asia crisis on U.S. agricultural exports of about 1 percent annually already included in the baseline projections, the late-December assessment estimated that U.S. agricultural exports would be further reduced by 3 percent in 1998, 5 percent in 1999 and 4 percent in 2000. Annual export losses in later years would reflect the degree of economic recovery in affected countries. These reductions reflect only the effects of the Asia crisis and do not include other changes in the trade outlook that have occurred since November. For updates of the fiscal 1998 trade forecasts, see USDA's "Outlook for U.S. Agricultural Exports" published in February, May, August, and December. The August and December issues will also contain forecasts for fiscal 1999.

to slow through 2000 from rates of recent years, but is then expected to recover. Exports, buoyed by increased exchange rate competitiveness, and domestic demand, cushioned by high domestic savings, are expected to lead the recovery. The near-term slowdown in economic growth is assumed in the baseline to be largely confined to Southeast Asia and is assumed to not affect East Asia, South Asia, or China.

While the baseline assumption is that policy reforms and international financial support will allow the Southeast Asian economies to recover relatively quickly from the current crisis, several factors may prevent as rapid a recovery as occurred in Mexico following the December 1994 devaluation of the peso. First, Japan provides a market for about 13 percent of developing Asia's imports, and Japan's economy is expected to show only sluggish near-term growth. Thus, there is no large neighboring market to drive a rapid recovery of the region's exports, as the United States did for Mexico. Second, about 40 percent of developing Asia's exports are typically destined for Asian markets other than Japan. Thus, the region-wide slowdown will be a significant drag on recovery. Recovery will also be affected by the fact that intra-regional investment, particularly from Japan, accounts for a large share of trans-border investment in the region. As a result, domestic savings performance and expansion of extra-regional trade will be important factors in the pace of recovery.

Growth in East Asia (Korea and Taiwan) is projected to continue to be strong, but will gradually decline to more sustainable rates over the long term as these economies mature. As in Southeast

Asia, East Asian growth depends largely on strong import demand from inside and outside Asia. Healthy expansion in North America and Europe over the mid-term will help buoy growth in East Asia. China's continued growth of over 8 percent will remain a source of strong import demand for other East Asian exports.

South Asia

While growth rates in South Asia are not expected to match East and Southeast Asia's, even over the long-term, per capita gains of about 3.6 percent per year are expected nonetheless. India, which produces 82 percent of the area's output, will grow on average by 5.5 percent annually, followed closely by Pakistan. Like China, India's large and increasingly liberalized domestic market will provide the bulk of the impetus for growth. India should also be capable of producing a more diversified set of export products, both manufactured and agricultural. Investment policy is increasingly liberalized and the inflow of foreign capital will boost the region's production capacity.

Promising export markets include the neighboring regions of the Middle East and the former Soviet Union, especially for lower-value products. The proximity to energy sources in the Middle East and, in the future, to energy from Central Asia, should likewise be a boon. Potentially in the long run, exports of higher-technology products, especially from India, will generate currency reserves needed to help improve the region's infrastructure and industrial capacity. Competitive gains will depend on the region's low-cost labor, more open trade and investment policies, and real exchange rates that are not distorted by restrictions on capital flows.

Africa and the Middle East

The plentiful supply of fossil fuel, particularly oil, that will be produced in Central Asia after the turn of the century is projected to hold world energy prices to only modest growth over the long run. This expectation, as well as the region's continued fast population growth, will hamper the real per capita output gains, especially in the oil-exporting countries of the Middle East. Despite uncertainty in Iraq and Iran, future growth in these countries is assumed at over 4 percent. Combined with similar GDP expansion in Turkey, growth in the Middle East region is projected at a steady rate near 4 percent.

In Africa, potential growth hinges on the performance of Egypt, Nigeria, and South Africa, the continent's largest countries. Whereas GDP growth in Egypt is projected to be relatively strong, Nigeria and South Africa are not expected to grow as fast. Nigeria, because of continued political instability, corruption, and largely unskilled labor, will be unable to attract enough foreign investment and take advantage of its abundant oil resources. In South Africa, a large labor force of unskilled workers, high interest rates because of budget problems, and general social discontent will pose risks for investors and limit growth. The politically troubled countries of Algeria, Sudan, and Congo will drag overall growth down in North Africa and in Sub-Saharan Africa. Nevertheless, increased North African trade with Europe and market reforms in some East and West African countries are generating relatively faster growth. The multilateral proposal by developed countries to partially forgive foreign debts of the poorest countries that have initiated reforms should help sustain early gains and may encourage further reforms.

South America

Strong growth is projected for the area, led by the MERCOSUR core countries of Brazil and Argentina. Freer trade will further integrate these countries' economies as they gear up for eventual hemispheric free trade with NAFTA countries. Behind the strong growth are reduced debt, less government intervention in the private sector, growing intra-regional trade, and heavier foreign direct investment. The past environment of overvalued currencies, large trade deficits, fiscal deficits, and low internal investment due to low savings are not expected to return. New economic policies now generate less inflation and more competitive industries as import barriers fall. Still, double-digit inflation in many countries (except Argentina and Chile) will carry through the next decade. Savings as a share of GDP are projected to rise only slowly and levels will remain substantially lower than in East and Southeast Asia. Because of this, the region's general dependence on foreign capital introduces the risk of capital flight in response to external shocks such as higher U.S. interest rates or another Mexican-type financial crisis.

World Population Growth

Africa and the Middle East will continue to have the fastest growing population over the next decade, averaging 2.4 to 2.5 percent per year. The next fastest regions are Asia and Latin America, each averaging 1.3 percent per year. These assumptions indicate that per capita GDP gains in Asia and Latin America will outpace those of Africa and the Middle East by a bigger margin than their GDP growth differentials.

The populations of the developed and transition economies are projected to grow by only 0.5 percent per year or less, with the slowest rates in Russia, Eastern Europe, Japan, and the European Union. Overall, the number of people in the world will increase at a declining rate, and per capita GDP will rise by an average 2 percent per year. By 2007, when the world's population will total 6.5 billion, and with 80 percent living in developing countries, GDP per person will average $4,900 (1990 dollars), up from $4,100 in 1997. The population assumptions, last updated in August 1997, were obtained from the U.S. Bureau of the Census and the United Nations.

Table 1. U.S. macroeconomic baseline assumptions

Item	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
GDP, billion dollars												
Nominal	7,636	8,070	8,456	8,908	9,427	9,997	10,569	11,175	11,814	12,490	13,183	13,897
Real 1992 chained dollars	6,928	7,168	7,336	7,506	7,701	7,904	8,099	8,303	8,510	8,721	8,924	9,124
percent change	2.8	3.5	2.3	2.3	2.6	2.6	2.5	2.5	2.5	2.5	2.3	2.2
Disposable personal income												
Nominal	5,608	5,893	6,217	6,561	6,958	7,389	7,839	8,294	8,756	9,251	9,753	10,319
percent change	4.7	5.1	5.5	5.5	6.0	6.2	6.1	5.8	5.6	5.7	5.4	5.8
Nominal per capita, dol	21,112	22,005	23,002	24,057	25,285	26,621	27,998	29,372	30,750	32,219	33,689	35,352
percent change	3.7	4.2	4.5	4.6	5.1	5.3	5.2	4.9	4.7	4.8	4.6	4.9
Real 1992 chained dollars	5,077	5,218	5,371	5,502	5,649	5,806	5,964	6,119	6,269	6,426	6,577	6,742
percent change	2.3	2.8	2.9	2.4	2.7	2.8	2.7	2.6	2.5	2.5	2.4	2.5
Real per capita, 92 dollars	19,115	19,485	19,870	20,173	20,528	20,919	21,303	21,669	22,015	22,380	22,719	23,097
percent change	1.3	1.9	2.0	1.5	1.8	1.9	1.8	1.7	1.6	1.7	1.5	1.7
Inflation Measures												
GDP price index, chained	110.3	112.6	115.3	118.7	122.4	126.5	130.5	134.6	138.8	143.2	147.7	152.3
percent change	2.3	2.1	2.5	2.9	3.1	3.3	3.2	3.1	3.1	3.2	3.1	3.1
CPI-U, 82-84=100	157.0	160.8	165.4	170.4	176.0	181.8	187.8	193.7	199.6	205.7	211.9	218.7
percent change	2.9	2.5	2.9	3.0	3.3	3.3	3.3	3.1	3.0	3.1	3.0	3.2
PPI, finished goods 82=100	131.3	131.8	134.0	137.2	140.7	144.4	148.1	151.9	155.7	159.7	163.8	167.9
percent change	2.6	0.4	2.5	2.4	2.5	2.6	2.6	2.5	2.5	2.5	2.5	2.5
PPI, crude goods 82=100	113.7	114.5	116.8	120.0	123.0	126.1	129.2	132.4	135.7	139.1	142.6	146.2
percent change	10.7	0.7	2.0	2.7	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
Crude oil price, $/barrel												
Refiner acq. cost, imports	20.6	19.5	20.2	21.0	21.9	22.8	23.8	24.8	25.9	27.0	28.2	29.4
percent change	20.0	-5.2	3.3	4.0	4.3	4.5	4.3	4.3	4.3	4.3	4.3	4.2
Real cost, 92 chained	18.7	17.3	17.5	17.7	17.9	18.1	18.3	18.5	18.7	18.9	19.1	19.3
percent change	17.3	-7.2	0.9	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Labor compensation per hour												
nonfarm business, 92=100	110.2	113.2	117.2	121.6	126.2	131.5	136.9	142.5	148.7	155.1	161.8	168.7
percent change	3.2	2.7	3.6	3.7	3.8	4.2	4.1	4.1	4.3	4.3	4.3	4.3
Interest rates, percent												
3 month T-bills	5.0	5.2	5.5	5.6	5.5	5.3	5.5	5.5	5.7	5.8	6.3	5.8
6 month comm. paper	5.4	5.6	6.0	6.1	6.0	5.8	6.0	6.0	6.1	6.4	6.6	6.4
Bank prime rate	8.3	8.5	8.8	8.8	8.6	8.3	8.3	8.3	8.4	8.6	8.9	8.5
Treasury bonds	6.4	6.6	6.8	7.0	7.2	7.1	7.3	7.3	7.4	7.5	7.3	7.2
Moody's Aaa bonds	7.4	7.5	7.7	7.8	8.0	7.9	7.9	8.0	8.1	8.2	8.2	8.0
Civilian unemployment												
rate, percent	5.4	5.0	5.0	5.2	5.3	5.3	5.3	5.0	5.1	5.1	5.1	5.3
Nonfarm payroll emp., mil	119.5	121.3	122.0	123.1	124.5	126.2	127.8	129.2	130.5	131.8	132.7	133.6
percent change	2.0	1.5	0.6	0.9	1.2	1.4	1.3	1.1	1.0	1.0	0.7	0.6
Total population, mil	265.6	267.8	270.3	272.7	275.2	277.6	280.0	282.4	284.7	287.1	289.5	291.9

Note: All real variables measured in billions of chained 1992 dollars; nominal variables in billions of current dollars. The macroeconomic assumptions were completed in September 1997.

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Table 1. U.S. macroeconomic baseline assumptions, continued

Item	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
International indicators												
Real GDP growth in OECD countries less U.S.												
Percent change	1.7	2.4	2.4	2.3	2.5	2.4	2.3	2.2	2.2	2.2	2.2	2.2
Private consumption deflator OECD less U.S.												
Percent change	1.7	1.8	2.2	2.3	2.4	2.5	2.6	2.6	2.6	2.7	2.7	2.8
Exchange rates, Federal Reserve index												
Nominal (March 1973=100)	87.1	96.9	97.3	98.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
Real (March 1973=100)	83.1	92.8	93.5	94.8	87.9	88.7	89.3	89.7	90.1	90.4	90.4	90.4
U.S. National Accounts												
Final sales												
Real	6,903	7,147	7,327	7,476	7,675	7,872	8,069	8,271	8,478	8,688	8,892	9,097
percent change	2.8	3.5	2.5	2.0	2.7	2.6	2.5	2.5	2.5	2.5	2.3	2.3
Consumer spending												
Nominal	5,207	5,480	5,763	6,040	6,393	6,783	7,186	7,597	8,022	8,475	8,916	9,406
Real	4,714	4,852	4,978	5,065	5,191	5,330	5,468	5,605	5,743	5,887	6,013	6,145
percent change	2.6	2.9	2.6	1.7	2.5	2.7	2.6	2.5	2.5	2.5	2.1	2.2
Real per capita, 1992 dollars	17,749	18,116	18,417	18,570	18,862	19,201	19,530	19,849	20,170	20,503	20,769	21,052
percent change	1.6	2.1	1.7	0.8	1.6	1.8	1.7	1.6	1.6	1.7	1.3	1.4
Investment, real	1,069	1,189	1,229	1,292	1,327	1,375	1,421	1,469	1,521	1,571	1,626	1,676
Fixed	1,042	1,168	1,220	1,262	1,301	1,343	1,391	1,437	1,488	1,538	1,594	1,649
percent change	8.3	12.1	4.5	3.5	3.0	3.2	3.6	3.3	3.6	3.3	3.7	3.4
Business inventory change	26	21	9	30	26	32	30	32	32	33	32	27
Exports												
Nominal	871	982	1,056	1,123	1,233	1,334	1,432	1,533	1,649	1,778	1,918	2,065
Real	857	958	1,026	1,080	1,171	1,250	1,325	1,400	1,481	1,569	1,662	1,758
percent change	8.3	2.1	4.7	5.3	8.5	6.7	6.0	5.7	5.8	5.9	6.0	5.8
Imports												
Nominal	966	1,115	1,215	1,275	1,364	1,462	1,571	1,680	1,799	1,929	2,066	2,221
Real	971	1,109	1,190	1,227	1,287	1,351	1,422	1,491	1,567	1,649	1,733	1,824
percent change	9.1	14.1	7.3	3.1	4.9	5.0	5.2	4.9	5.1	5.2	5.1	5.2
Net exports												
Nominal	-95	-133	-159	-152	-131	-128	-139	-147	-149	-151	-148	-155
Real	-114	-151	-164	-147	-116	-101	-98	-92	-86	-80	-71	-66
Government spending, real	1,258	1,273	1,290	1,296	1,299	1,300	1,307	1,321	1,332	1,344	1,356	1,368
percent change	0.5	1.2	1.3	0.5	0.2	0.1	0.5	1.0	0.9	0.9	0.9	0.9
Federal	464	459	453	440	426	409	391	375	372	369	366	364
State and local	794	814	836	856	872	891	916	945	960	974	989	1,005
Other Variables												
Money supply, M2, billion dollars	3,811	4,002	4,201	4,424	4,654	4,901	5,160	5,434	5,722	6,025	6,344	6,681
percent change	4.7	5.0	4.7	5.3	5.2	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Chained Price indices, 92=100												
GDP	110.0	112.9	115.3	118.7	122.4	126.5	130.5	134.6	138.8	143.2	147.7	152.3
PCE	110.5	112.9	115.8	119.3	123.2	127.3	131.4	135.5	139.7	144.0	148.3	153.1
Exports	101.6	102.5	103.0	104.0	105.3	106.8	108.1	109.5	111.4	113.4	115.4	117.4
percent change	-1.8	0.8	0.5	1.0	1.2	1.4	1.3	1.3	1.7	1.8	1.8	1.8
Imports	99.4	100.5	102.1	103.9	106.0	108.2	110.5	112.6	114.8	117.0	119.2	121.7
percent change	-2.2	1.0	1.6	1.7	2.0	2.1	2.1	2.0	1.9	1.9	1.9	2.1

Note: All real variables measured in billions of chained 1992 dollars; nominal variables in billions of current dollars. The macroeconomic assumptions were completed in September 1997.

Table 2. Foreign real GDP baseline growth assumptions

Region/country	1995	1996	1997	1998	1999	2000	2001	Average 1990-1996	Average 1997-2001	Average 2002-2007
						Percent change				
World	2.4	3.0	3.2	3.0	3.0	3.3	3.3	2.3	3.2	3.2
less U.S.	2.5	3.0	3.1	3.4	3.4	3.6	3.6	2.4	3.4	3.6
Developed economies	2.0	2.4	2.7	2.5	2.4	2.6	2.5	2.0	2.5	2.4
United States	2.0	2.8	3.5	2.3	2.3	2.6	2.6	1.9	2.7	2.4
Canada	2.2	2.2	2.5	3.0	3.1	3.1	3.1	1.4	3.0	2.9
Japan	0.9	3.4	1.4	2.6	2.3	2.4	2.5	2.1	2.2	2.3
Australia	3.3	4.3	3.0	2.9	2.6	2.6	2.5	2.8	2.7	2.5
European Union-15	2.5	1.3	2.5	2.5	2.4	2.6	2.4	1.9	2.5	2.2
Transition economies	-3.1	-3.7	0.2	1.2	2.1	2.8	3.3	-6.9	1.9	3.5
Eastern Europe	5.2	4.6	4.9	5.1	4.0	4.2	4.2	-0.4	4.5	4.2
Czech Republic	5.0	4.2	4.9	5.1	3.6	3.6	3.6	-1.6	4.1	3.6
Hungary	1.5	1.4	3.9	5.1	4.1	4.1	4.1	-1.0	4.3	4.1
Poland	6.6	6.1	5.3	5.1	4.0	4.5	4.5	0.8	4.7	4.5
Former Soviet Union	-5.2	-6.1	-1.3	-0.1	1.4	2.3	2.9	-8.4	1.0	3.2
Russia	-4.0	-6.0	-1.0	0.0	1.5	2.5	3.0	-7.8	1.2	3.2
Ukraine	-11.8	-10.0	-5.0	-2.0	0.0	1.0	2.0	-11.6	-0.8	3.2
Other	-3.6	1.8	2.5	3.0	3.0	3.2	3.7	-7.4	3.1	3.4
Developing countries	4.4	5.6	5.4	5.0	5.2	5.5	5.6	5.1	5.3	5.5
Asia	8.2	7.3	6.5	6.5	6.4	6.6	6.7	7.8	6.5	6.6
East & Southeast Asia	8.8	7.7	6.9	6.7	6.6	6.9	7.0	8.6	6.8	6.8
China	10.7	10.0	9.0	8.9	8.8	8.7	8.6	10.8	8.8	8.2
Hong Kong	4.6	4.2	4.8	5.0	4.9	4.9	4.8	5.0	4.9	4.7
Korea	9.0	6.8	6.4	6.1	6.0	6.0	5.9	7.7	6.1	5.6
Taiwan	6.1	5.5	6.4	6.1	6.1	5.8	5.6	8.6	6.0	5.6
Indonesia	8.1	6.8	5.5	5.2	4.8	6.0	6.3	7.8	5.6	6.2
Malaysia	9.4	8.2	5.5	5.4	5.0	6.0	7.0	8.8	5.8	7.0
Philippines	4.8	5.5	5.0	5.0	5.0	5.0	5.0	2.8	5.0	5.0
Thailand	8.7	6.7	2.7	2.0	1.0	4.0	6.0	8.6	3.1	6.0
Vietnam	9.5	9.7	9.7	9.7	9.5	9.5	9.5	7.9	9.6	9.2
South Asia	5.8	5.5	4.9	5.5	5.6	5.5	5.5	4.7	5.4	5.4
India	6.1	5.7	5.0	5.7	5.7	5.6	5.6	4.8	5.5	5.5
Pakistan	4.4	4.4	4.4	4.8	5.3	5.3	5.3	4.6	5.0	5.3
Bangladesh	4.4	5.0	5.0	4.3	4.3	4.3	4.3	4.6	4.4	4.3
Latin America	-1.3	3.7	4.5	4.4	5.1	5.0	5.1	2.1	4.8	4.7
Caribbean & Central America	3.1	3.0	3.0	3.4	3.6	3.7	3.7	2.9	3.5	3.4
Mexico	-7.2	5.1	4.9	4.1	5.4	5.4	5.5	1.9	5.0	4.6
South America	1.0	3.3	4.3	4.6	5.1	4.9	4.9	2.2	4.8	4.8
Argentina	-4.6	4.4	5.2	4.9	4.8	4.6	4.9	4.4	4.9	4.9
Brazil	3.0	2.9	4.0	4.4	5.2	5.0	5.0	1.5	4.7	4.8
Other	4.1	1.4	3.8	4.3	4.7	4.8	4.8	3.5	4.5	4.4
Middle East	2.9	4.7	4.7	3.3	3.6	4.1	4.4	4.4	4.0	4.3
Iran	2.7	4.9	4.6	2.6	3.2	4.3	4.8	5.5	3.9	4.6
Iraq	1.5	42.0	16.7	4.3	4.4	4.4	4.4	-2.7	6.8	4.4
Saudi Arabia	-2.4	-0.1	4.6	3.8	3.5	3.2	3.2	2.6	3.7	3.2
Turkey	6.8	3.0	3.8	4.8	4.8	4.5	4.5	4.1	4.5	4.4
Other	3.7	3.7	3.7	3.7	3.7	3.7	3.7	6.4	3.7	3.7
Africa	3.0	3.5	3.2	3.3	3.6	3.6	3.6	1.9	3.5	3.6
North Africa	2.2	5.0	4.1	4.2	4.2	4.2	4.2	2.0	4.2	4.1
Algeria	4.3	4.6	2.8	2.8	2.8	2.8	2.8	0.9	2.8	2.8
Egypt	4.2	5.2	5.0	5.3	5.0	5.1	4.9	2.6	5.1	4.4
Morocco	-5.0	5.0	4.8	5.0	5.1	5.1	5.1	2.3	5.0	5.1
Tunisia	3.2	6.1	5.6	5.6	5.6	5.6	5.6	5.1	5.6	5.6
Sub-Saharan Africa	3.5	2.0	2.9	2.7	3.0	3.0	3.0	2.9	2.9	3.0
South Africa	3.4	3.2	2.3	2.8	3.5	3.5	3.5	0.8	3.1	3.5

Sources: DRI; Project LINK; Economic Research Service, U.S. Department of Agriculture. The macroeconomic assumptions were completed in September 1997.

Table 3. Baseline population growth assumptions

Region/country	1995	1996	1997	1998	1999	2000	2001	Average 1990-1996	Average 1997-2001	Average 2002-2007
					Percent change					
World	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.5	1.4	1.2
less U.S.	1.5	1.4	1.4	1.4	1.4	1.4	1.3	1.5	1.4	1.3
Developed Economies	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.5
United States	1.0	0.9	0.8	0.9	0.9	0.9	0.9	1.0	0.9	0.8
Canada	1.2	1.1	1.0	1.0	1.0	0.9	0.9	1.3	1.0	0.8
Japan	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.1
Australia	1.0	1.0	1.0	0.9	0.9	0.9	0.9	1.2	0.9	0.8
European Union-15	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.3	0.2
Transition Economies	0.0	0.0	0.0	0.1	0.2	0.3	0.3	0.1	0.2	0.3
Eastern Europe	-0.2	-0.2	-0.1	0.0	0.1	0.2	0.3	-0.2	0.1	0.2
Czech Republic	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.1	0.1
Hungary	-0.7	-0.7	-0.7	-0.6	-0.5	-0.4	-0.3	-0.6	-0.5	-0.3
Poland	0.2	0.1	0.1	0.2	0.3	0.3	0.4	0.3	0.3	0.4
Former Soviet Union	0.1	0.1	0.1	0.1	0.2	0.3	0.4	0.3	0.2	0.4
Russia	0.0	-0.1	-0.1	-0.1	0.0	0.1	0.1	0.1	0.0	0.1
Ukraine	-0.5	-0.4	-0.4	-0.3	-0.2	-0.1	-0.1	-0.2	-0.2	-0.1
Other	0.5	0.5	0.6	0.7	0.8	0.9	1.0	0.9	0.8	1.0
Developing countries	1.7	1.7	1.7	1.6	1.6	1.6	1.5	1.8	1.6	1.5
Asia	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.6	1.4	1.2
East & Southeast Asia	1.2	1.2	1.1	1.1	1.1	1.0	1.0	1.3	1.1	0.9
China	1.0	1.0	1.0	0.9	0.9	0.8	0.8	1.1	0.9	0.7
Hong Kong	2.1	1.9	1.7	1.5	1.4	1.2	1.2	1.6	1.4	1.0
Korea	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	1.0	0.8
Taiwan	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.9	0.8
Indonesia	1.6	1.5	1.5	1.5	1.5	1.5	1.4	1.6	1.5	1.3
Malaysia	2.2	2.1	2.1	2.0	2.0	1.9	1.9	2.2	2.0	1.8
Philippines	2.3	2.2	2.2	2.1	2.1	2.0	2.0	2.3	2.1	1.9
Thailand	1.1	1.0	1.0	1.0	1.0	0.9	0.9	1.2	1.0	0.8
Vietnam	1.7	1.6	1.6	1.5	1.4	1.3	1.3	1.9	1.4	1.2
South Asia	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.9	1.7	1.5
India	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.8	1.5	1.4
Pakistan	2.7	2.7	2.8	2.8	2.8	2.7	2.7	2.8	2.7	2.6
Bangladesh	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.9	1.8	1.5
Latin America	1.6	1.5	1.5	1.5	1.4	1.4	1.3	1.7	1.4	1.2
Caribbean & Central America	1.7	1.7	1.6	1.6	1.6	1.5	1.5	1.8	1.6	1.5
Mexico	1.9	1.9	1.9	1.8	1.8	1.8	1.7	2.0	1.8	1.6
South America	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.6	1.3	1.1
Argentina	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.0
Brazil	1.3	1.2	1.1	1.1	1.0	0.9	0.9	1.4	1.0	0.8
Other	1.9	1.8	1.8	1.7	1.7	1.6	1.6	2.0	1.7	1.5
Middle East	2.4	2.5	2.5	2.5	2.4	2.4	2.4	2.6	2.4	2.3
Iran	2.4	2.3	2.2	2.1	2.0	2.2	2.3	2.7	2.2	2.1
Iraq	2.3	2.5	2.8	2.9	3.0	3.0	2.9	2.3	2.9	2.8
Saudi Arabia	2.8	3.2	3.5	3.7	3.6	3.5	3.3	2.9	3.5	3.1
Turkey	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.7	1.5	1.3
Other	3.5	3.4	3.3	3.3	3.2	3.2	3.1	3.7	3.2	2.9
Africa	2.7	2.6	2.6	2.6	2.6	2.6	2.6	2.7	2.6	2.5
North Africa	2.1	2.0	2.0	2.0	1.9	1.9	1.9	2.2	1.9	1.8
Algeria	2.3	2.3	2.2	2.2	2.1	2.1	2.1	2.4	2.1	2.0
Egypt	2.0	1.9	1.9	1.9	1.8	1.8	1.8	2.2	1.8	1.7
Morocco	2.1	2.1	2.1	2.0	2.0	1.9	1.9	2.2	2.0	1.8
Tunisia	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.9	1.7	1.6
Sub-Saharan Africa	2.9	2.9	2.8	2.8	2.8	2.8	2.8	2.9	2.8	2.8
South Africa	2.3	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.2	2.1

Sources: U.S. Department of Commerce, Bureau of the Census; United Nations. The population assumptions were completed in August 1997.